

REMARKS

By this amendment, claims 1-48 are submitted for reconsideration without any amendments having been made to the claims 1-48.

In the final Office Action, the Examiner finally rejected claims 1, 4-8, 10-11, 14-15, 17-24, 27, 30-31, 33-39, 42-44 and 47-48 under 35 USC 102(b) as anticipated by Ryan (US Pat No. 5,608,799). In addition, claims 2-3, 9, 12-13, 16, 25-26, 28-29, 32, 40-41 and 45-46 are rejected under 35 USC 103(a) as being obvious over Ryan.

Claims 49-70, previously submitted in applicant's first amendment of July 5, 2006 have been withdrawn from consideration as being directed to a non-elected invention.

With regards to the rejection under 35 USC 102(b) as anticipated by Ryan (5,608,799), applicant respectfully submits that Ryan fails to disclose or suggest the features of the present invention as set forth in claims 1-48, and particularly claims 1, 4-8, 10-11, 14-15, 17-24, 27, 30-31, 33-39, 42-44 and 47-48.

However, before addressing the lack of anticipation by Ryan ('799' of the specific claims 1-48, applicant would like to present here several arguments (labeled 1-9) which accent the basic, and specific differences between the subject matter of Ryan with respect to that of the present invention as described and claimed.

1. Applicant respectfully draws the attention of the Examiner to the fact that the present invention is based on and thus is concerned with copy protection technology, not scrambling (encrypting) technology. That is, the present invention is concerned with a method and apparatus for modifying a video signal to provide a copy protection process and/or to enhance an existing copy protection process. Those skilled in these technologies are fully aware that the two processes are based on different concepts and produce decidedly different and distinct functions and results. To wit, video copy protection is defined as a system whereby a copy protected video signal is viewable (watchable) on, for example, a receiving television set. However a played back version of a recording of the original video signal is degraded by the copy protection so that it produces a signal that is not acceptably watchable after it has been recorded.

Thus a copy protection process is to be differentiated from a video scrambling or encrypting process. A scrambled video signal is not watchable unless it has been descrambled, whereas a copy protected signal is watchable even though it is still copy protected. It may be

seen that the signals output from the flowchart (Ryan, Fig. 3) step 60 are scrambled and thus unwatchable. See also the scrambled video output from output driver 110 of Fig. 4.

To further illustrate the difference, the scrambled signal that is described in Ryan requires a descrambler or decoder to provide a viewable picture, whereas a copy protection signal does not require a descrambler or decoder to produce a viewable picture on a TV set.

It follows that the scrambling/descrambling process of Ryan does not and cannot perform the function of the present invention which is concerned with a system and method for providing or enhancing copy protection in a video signal. Ergo, since the two processes are basically distinct for the reasons discussed above, there would be no motivation for one skilled in the art of copy protection to believe that a reference describing a scrambling/descrambling process would anticipate or make obvious a process for providing or enhancing a copy protection process such as set forth in the present claims 1-48 and particularly claims 1, 4-8, 10-11, 14-15, 17-24, 27, 30-31, 33-39, 42-44 and 47-48.

2. In the rejection of claim 1 (and other claims) the Examiner cites the Ryan Abstract and Figs. 2B, 3 and 15 as anticipatory. To the contrary, the Ryan Abstract recites the processes of; a random wobble of the active portion of the video signal, adding an edge fill signal, wiggling or position modulating the horizontal sync pulses, altering the location of vertical sync signals, and adding extra color burst in the front porch for allowing the use of a simplified decoder/descrambler. None of these processes, which are listed for example in the Abstract, comprise a method for providing a copy protection video signal. All of the processes are part of a scrambling signal with the exception of the color burst signal in the front porch. The front porch color burst signal is not a scrambling signal, but is a signal added to allow for a simpler or more cost effective descrambling circuit.

3. Fig. 2B fails to disclose or suggest any elements that would provide a copy protection signal. None of the functional blocks shown illustrate any type of copy protection signal. Instead, Fig. 2B depicts generic video processing circuits for converting an input analog video signal to a digital video signal and for converting a digital video signal into an output analog video signal.

4. Fig. 3 illustrates a type of processing for scrambling a video signal including wobbling the active lines in step 60, and position modulating horizontal sync pulses for

concealment in step 58. Again, none of the blocks (steps) in Fig. 3 remotely suggest providing a copy protection signal.

5. Regarding Fig. 15, Fig. 15A illustrates a standard video signal with a standard color burst signal in the back porch. Fig. 15B illustrates a video signal wherein a pre-burst color burst signal is placed in the front porch of a standard video signal. Fig. 15C illustrates a video signal wherein color burst signals are added to the front porch and sync tip of a standard video signal. Ergo, Figs. 15A-15C fail to suggest a negative-going presync pulse of substantially sync tip level followed by a presync positive-going pulse.

6. For example, in Ryan, all of the color burst signals are of a frequency that is rejected or filtered out by a sync separator, whereby the lower frequency signals such as the sync pulses are cleanly derived via a sync separator circuit; that is, sync stripper 594 of Fig. 16A. As stated in Ryan, column 25, lines 9-11, "...the sync signal is separated at sync stripper 594 from the video and separated further into horizontal and vertical sync pulses...". Thus the color burst signals are not separated out by the sync stripper. To this end, note that color burst signals in Fig. 15 do not extend down to a sync tip level, which causes the color burst signal to evade separation or detection via the sync (tip) stripper circuit.

Therefore, none of the front porch color burst signals constitutes a negative-going presync pulse of substantially sync tip level as recited for example in claims 1, 11, 17, 27, 33, 34, 38, 44. That is, none of the front porch color burst signals extend down to the sync tip level so as to be separated by a sync stripper circuit in the manner of applicant's negative-going presync pulse.

7. In the rejections, the Examiner further cites Figs. 10 and 14 of Ryan. However, Fig. 10 illustrates how the video scrambling process causes an unstable chroma signal when the active video line is wobbled (see Fig. 10B of Ryan). By way of heterodyning from a master clock, and using various frequency mixing steps, a stabilized chroma signal is achieved as shown in Figure 10E. However, none of the Figs. 10A-10E relate to copy protection in terms of adding a negative-going presync pulse or of reducing the amplitude of H sync or pseudo sync pulses.

8. Regarding Figs. 14A-14C of Ryan, these figures illustrate waveforms related to the scrambled video signal. See column 9, line 1 of Ryan.

9. The Examiner also cites passages in column 9, lines 24-66, which however describes a scrambling process using wobbling video lines, and column 11, lines 49-65, which

describes the heterodyne chroma stabilizing circuit. Neither of these cited passages remotely relate to providing or enhancing a copy protection signal in the manner set forth in the claims 1-48.

With regards now to the specific rejections of the claims 1, 4-8, 10-11, 14-15, 17-24, 27, 30-31, 33-39, 42-44 and 47-48, regarding claim 1, the Examiner states that Ryan discloses “a method of modifying a video signal or copy protected video signal... to provide a copy protection effect... or to enhance the copy protected video signal,” and refers to the Abstract and Figs. 2B, 3 and 15 as support for the rejection. However, applicant respectfully submits that this conclusion is incorrect for the reasons fully discussed in the arguments 1 and 2 above, namely, that Ryan fails to suggest or intend a copy protection process.

The Examiner then states that Ryan discloses the element of claim 1, namely... “applying a negative-going presync pulse of substantially said sync tip level followed by a positive-going pulse in a front porch region...”, and refers to Fig. 15B of Ryan as support for the rejection.

To the contrary, first, the pre-sync color burst of Ryan does not provide the function of applicant’s negative-going presync pulse. See arguments 5 and 6 above. In addition, Ryan fails to suggest a negative-going presync pulse. The signal shown in Ryan, Fig. 15B is a pre-burst, that is, partial color burst signal, not a negative-going pulse. Second, the “pre-burst” signal in Fig. 15B is not of “substantially said sync tip level.” Third, Ryan fails to suggest or intend a positive-going pulse of any kind which would perform the intended function of applicant’s claimed positive-going pulse in the front porch region. It is emphasized that the pre-burst signal in the front porch region of Ryan’s Fig. 15B does not and cannot provide the function of the invention; namely, provide copy protection for the video signal or to enhance the playability and/or the effectiveness of the copy protected video signal.

Regarding claim 4, Ryan discloses a portion of color burst prior to and after the H sync, however claim 4 depends from claim 1 and Ryan fails to disclose an additional portion of color burst signal in combination with a negative-going pulse of substantially the sync tip level together with a positive-going pulse, all in the front porch region. See also the argument 6 above.

Regarding claim 5, Ryan fails to remotely suggest adding an extra post sync negative-going pulse after H sync in the back porch region. See applicant’s Fig. 3E, the extra post sync

negative-going pulse (51). Ryan's partial color burst signal in the back porch region cannot and does not perform the function of applicant's claimed extra post sync negative-going pulse (51).

Regarding claim 6, as discussed with respect to claim 1, Ryan fails to disclose or suggest applicant's negative-going presync pulse or a presync pulse of substantially the sync tip level. See argument 6 above.

Regarding claim 7, Ryan fails to remotely disclose or suggest an additional negative-going pulse added to at least a latter portion of the negative-going presync pulse. See the additional negative-going pulse (42) shown in dashed lines in Fig. 2G of the present application. As discussed in claim 1 above, Ryan fails to suggest a presync negative-going pulse, fails to suggest an additional negative-going pulse (such as pulse 42), and therefore cannot disclose or even suggest an additional negative-going pulse added to at least a latter portion of a negative-going presync pulse.

Regarding claim 8, as discussed above with respect to claim 1, Ryan fails to provide a copy protection effect for a video signal or to enhance a copy protected video signal as recited in the preamble of claim 8. Ryan, to the contrary, concerns a system for scrambling/descrambling a video signal as discussed with respect to claim 1 and also arguments 1-4. That is, the system of Ryan provides a completely different function and corresponding effect with regards to a video signal. In addition, Ryan does not disclose and is not remotely concerned with pseudo sync and/or AGC signals.

It follows therefore that Ryan fails to disclose or suggest applying an added negative-going pulse to at least a portion of an H sync signal or to at least a portion of a pseudo sync signal, to provide a negative-going extension of the H sync and/or pseudo sync signal. See applicant's Figs. 2 and 3B, 3D for added negative-going pulse (38) on the H sync pulse (30), and Figs. 3C, 3D for added negative-going pulse (50) on the pseudo sync pulse (46). Fig. 15C of Ryan discloses only partial color burst signals added to front porch and back porch regions and to the H sync signal. Further, Ryan fails to disclose or even mention pseudo sync signals and obviously cannot disclose added negative-going pulses added to pseudo sync signals in the absence of pseudo sync signals.

Regarding claim 10, contrary to the Examiner's contention, Ryan fails to suggest reducing the amplitude of an H sync signal. In addition, since pseudo sync signals are not even mentioned in Ryan, Ryan obviously also fails to disclose reducing the amplitude of such (non-

existent) pseudo sync signals. The passage referred to by the Examiner in Col. 11, lines 49-65, is discussed in arguments 7 and 9 above, and concerns a process of heterodyning to achieve a phase stable chroma signal with unaffected envelope wobble. There is no mention of reducing the amplitude of sync or pseudo sync signals.

Regarding the claims 11 and 17, the arguments presented in respect of claim 1 and arguments 1-4 and 6 above also apply here. Ergo, Ryan does not disclose a copy protection or copy protection enhancement signal, and does not suggest applying negative-going presync pulses of substantially sync tip level and positive-going presync pulses in a front porch region of the HBI.

Regarding claims 14 and 15, Ryan fails to disclose any amplitude modulating of positive-going pulses and, as discussed in claims 8 and 10 above, fails to even mention pseudo sync pulses. The “wobble” in the scrambling/descrambling process of Ryan in the passage referred to by the Examiner consist of time shifting the location of the active portion of the video frame. There is no amplitude modulating or pulse width modulating of the positive-going pulse, as recited in claims 14, 15. See the argument 9 above.

Regarding claims 21, 22 and 23, Ryan fails to anticipate the claims 21-23 for the same reasons as given above with respect to claims 5, 6 and 7, respectively.

Regarding claims 24 and 27, Ryan fails to anticipate the claims 24 and 27 for the same reasons as given above with respect to claims 1, 7 and 8, and arguments 1-4.

Claims 30 and 31 are allowable over Ryan for the reasons given with respect to Claims 14, 15 and 10.

Claims 33, 34, 38 and 44 are allowable over Ryan for reasons given above with respect to claim 1 and arguments 1-4 and 6.

Claims 35 and 37 are allowable over Ryan for reasons given above with respect to claim 8 and arguments 1-4.

Claims 36 and 39 are allowable over Ryan for reasons given above with respect to claim 10 and arguments 7 and 9.

Claims 42, 43, 47 and 48 are allowable over Ryan for reasons given above with respect to claims 6 and 7.

It follows, in view of the distinctions set forth in the above arguments, that Ryan fails to suggest or intend the combination of the invention as recited in the claims 1, 4-8, 10-11, 14-15,

17-24, 27, 30-31, 33-39, 42-44 and 47-48. It has consistently been held by the courts that an anticipating reference under 35 USC 102 must disclose every material element of the claimed invention, that is, must identically describe applicant's invention, and must, together with the knowledge of one of ordinary skill in the art, enable the practice of the invention. See, for example, Kalman v. Kimberly-Clark, 713 F.2d 760, 218 USPQ 781 (Fed. Cir. 1983); Jamesbury v. Litton Industrial Products Inc., 756 F.2d at 1560, 225 USPQ 253,256 (Fed. Cir 1985); Northlake Marketing & Supply Inc. v. Glaverbel S.A., 45 USPQ2d 1541 (N.D.IL. 1997); Database Excelleration Systems Inc. v. Imperial Technology Inc., 50 USPQ2d 1527 (N.D.IL. 1999); General Electric Co. v. Nintendo Co., 50 USPQ2d 1910 (CAFC 1999); Ex parte Rozzi, 63 USPQ2d 1196 (BPAI 2002).

Accordingly, referring to the claims, Ryan fails to disclose means for modifying a video signal and/or copy protection signal to provide a copy protection effect for a video signal or to enhance the copy protected video signal, and fails to disclose the application of a negative-going presync pulse of substantially the sync tip level followed by a positive-going pulse in the front porch region... etc., fully argued above.

It is respectfully submitted that Ryan thus fails to identically describe applicant's invention as claimed, and further fails to enable one skilled in the art to practice the claimed invention from Ryan alone, as is required under 35 USC 102, without re-inventing Ryan by exertion of his own inventive skill, and/or without recourse to the teachings of this application., for the reasons fully discussed above.

With regards to the rejection under 35 USC 103(a) of claims 2-3, 9, 12-13, 16, 25-26, 28-29, 32, 40-41 and 45-46, these claims are dependent claims directed to further particulars of the features set forth in the claims from which they depend, and in combination with the independent and any intermediate claims recite characteristics of the invention which are not disclosed or suggested in Ryan. Ryan fails to anticipate the independent claims for reasons fully discussed in the arguments 1-9 above and presented with respect to the specific claims rejected under 35 USC 102(b). Accordingly, given that the independent claims 1, 4-8, 10-11, 14-15, 17-24, 27, 30-31, 33-39, 42-44 and 47-48 are not anticipated under 35 USC 102(b) but are respectfully submitted to be allowable over Ryan as fully discussed above, it follows that claims depending from the allowable claims likewise should be allowable, which action is earnestly solicited.

If there are any questions about this paper or the associated application, please contact the undersigned at the telephone number given below. If it is determined that a telephone conference would expedite the prosecution of this application, the Examiner is invited to telephone the undersigned at the number given below. Alternatively, Applicant is willing to initiate a telephone conference with the Examiner to review and explain the claims versus the cited reference to Ryan.

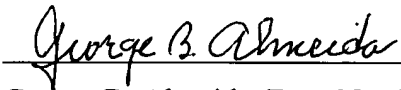
If the Examiner persists in the final rejection of the subject application, Applicant respectfully requests entry of the amendment for purposes of appeal.

Please charge any required fees due to this amendment to Deposit Account No. 13-0762.

Respectfully submitted,

MACROVISION CORPORATION

Dated: 12/27, 2006


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